



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,185	06/08/2007	Joseph B. Schlenoff	FSU 70008.3 (04-107)	7098
321	7590	02/19/2009		
SENNIGER POWERS LLP			EXAMINER	
100 NORTH BROADWAY			KRYLOVA, IRINA	
17TH FLOOR				
ST LOUIS, MO 63102			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			02/19/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,185	<b>Applicant(s)</b> SCHLENOFF, JOSEPH B.
	<b>Examiner</b> Irina Krylova	<b>Art Unit</b> 1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 08 June 2007.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-38 is/are pending in the application.  
 4a) Of the above claim(s) 14-27,34 and 35 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-13,28-33 and 36-38 is/are rejected.  
 7) Claim(s) 29 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 02/23/2007

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-13, 28-33, 36-38, drawn to a film comprising oppositively charged fluorine-containing polymers

Group II, claim(s) 14-27, drawn to a method for controlling hydrophobicity of a surface of an article comprising depositing oppositively charged fluorine-containing polymers.

Group III, claim(s) 34-35, drawn to a motor oil comprising complexed fluorinated polyelectrolytes.

The inventions listed as Groups I,II,III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons. The common technical feature in inventions of Groups I, II, and III is a charged fluorinated polymer. This feature is known in the prior art (see US 4,169,023). Therefore, there is a lack of

unity *a posteriori*, since the technical feature (in this case, a charged fluorinated polymer) is not a technical feature that defines a contribution over the prior art (see MPEP 1850-II).

During a telephone conversation with Mr. Paul Fleischut on February 4, 2009 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-13, 28-33, 36-38. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-27 and 34-35 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims are 1-13, 28-33, 36-38 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 7-17 of copending Application No. 11/130,972 (Published as US 2005/0287111). Although the conflicting claims are not identical, they are not patentably distinct from each other because of reasons given below.

Us application '972 discloses an article comprising a polyelectrolyte film comprising a network of a net positively charged polyelectrolyte and a negatively charged polyelectrolyte, wherein a net positively charged polyelectrolyte or a negatively charged polyelectrolyte contain at least two fluorine atoms. The combination of a net positively charged polyelectrolyte and a net negatively charged polyelectrolyte, is deposited on a substrate, including glass and metal. This combination of oppositively charged fluorine-containing polyelectrolytes and negatively charged fluorine-containing polyelectrolytes and articles comprising the polyelectrolyte film deposited on a substrate, are the same as claimed in the instant invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-13, 28-33, 36-38 are directed to an invention not patentably distinct from claims 1-4, 7-17 of commonly assigned US application No. 11/130,972 (Published as US 2005/0287111).

Specifically, see the discussion in paragraph 2 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned US application No. 11/130,972 , discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

4. Claims 1-13, 28-33, 36-38 are rejected under 35 U.S.C. 103(a) as being obvious over US application No. 11/130,972 (Published as US 2005/0287111).

Specifically, see the discussion set forth in paragraph 2 above.

The applied reference has a common assignee and a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

***Claim Objection***

5. Claim 29 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 29 depends on claims 1 and 30. See MPEP § 608.01(n).

Accordingly, the claim 29 has not been further treated on the merits.

In addition claim 29 consists of two sentences.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by **Stevenson et al** in US 2004/0191504.

**Stevenson et al** discloses a film used for coating a substrate, wherein the film comprises at least one bilayer of a polyanion electrolyte layer and a polycation electrolyte layer (Abstract). As to instant claims 2-5, the polyanion electrolyte comprises a fluorine-modified polyacrylate ([0021], [0028]).

The polycation comprises a fluorinated polyallylamine hydrochloride ([0029], [0031]).  
The layers are assemble by electrostatic attraction of interlayer charges ([0035]).

7. Claims 1-3, 5, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by **DeLongchamp et al** in *Chem. Mater.*, 2003, 15, 1165-1173.

**DeLongchamp et al** discloses a layer-by-layer deposited polyelectrolyte film for electrochemical applications comprising a cationic layer comprising linear polyethylene imine and an anionic layer comprising fluorine containing sulphonated polyolefin having a structure provided in claim 8 of the instant invention (Abstract, page 1165, page 1167).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over **DeLongchamp et al** in *Chem. Mater.*, 2003, 15, 1165-1173.

**DeLongchamp et al** discloses a layer-by-layer deposited polyelectrolyte film for electrochemical applications comprising a cationic layer comprising linear polyethylene imine and an anionic layer comprising fluorine containing sulphonated polyolefin having a structure provided in claim 8 of the instant invention (Abstract, page 1165, page 1167). Since **DeLongchamp et al** teaches the use of the polyelectrolyte film in electrochemical applications, which provides ion conductivity (see page 1171 in **DeLongchamp et al**), therefore, it would have been obvious to use these films between an electrically conductive contact and a light emitting medium.

In addition, Claims 36-38 are the intended use claims.

As to the claimed intended use, MPEP 2111.02 states:

During examination, statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the recited purpose or intended use results in a structural difference (or, in the case of process claims, manipulative difference) between the claimed invention and the prior art. If so, the recitation serves to limit the claim. [MPEP 2111.02 (Citing *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963)]

No structural difference can be discerned between the films of prior art and the instant invention.

9. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **DeLongchamp et al** in *Chem. Mater.*, 2003, 15, 1165-1173, as applied to claim 1 above, and further in view of **Tomita et al** in US 5,312,710.

**DeLongchamp et al** discloses a layer-by-layer deposited polyelectrolyte film for electrochemical applications comprising a cationic layer comprising linear polyethylene imine and an anionic layer comprising fluorine containing sulphonated polyolefin.

**DeLongchamp et al** fails to teach the addition of inorganic particles into the composition.

**Tomita et al** discloses electrophotographic toner comprising a fluorinated vinyl polymer electrolyte and fine particles comprising metal oxides, including aluminum oxide, silicon oxide, iron oxide, having a particle size of less than 2 microns (col. 7, lines 1-5). The particles are used to provide good chargeability and narrow charge distribution (Abstract, col. 7, lines 20-25).

Though clay particles, including attapulgite clay, are not mentioned in **Tomita et al**, since they are known to be charged particles having both positive and negative charges (see Wikipedia encyclopedia) and can provide conductive properties similar to metal oxides, mentioned in **Tomita et al**, therefore, it would have been obvious to one skilled

in the art to employ the attapulgite clay particles in the composition of **Tomita et al** as well.

Since **DeLongchamp et al** discloses a polyelectrolyte film for use in electrochemical applications, but fails to specify the use of micro-sized conductive particles, but **Tomita et al** teaches the use of conductive microparticles in combination with fluorine-containing polyelectrolyte for improving chargeability of the composition, therefore, it would have been obvious to one skilled in the art at the time of the invention was made, to include metal oxide microparticles of **Tomita et al** in the composition of **DeLongchamp et al** to improve provide good chargeability and narrow charge distribution of the composition of **DeLongchamp et al** (see col. 7, lines 20-25 in **Tomita et al**).

10. Claim 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schlenoff** in WO 03/014234 in view of **Stevenson et al** in US 2004/0191504 and further in view of **Speaker** in US 4,554,076.

**Schlenoff** discloses a polyelectrolyte complex comprising a positively charged polyelectrolyte and a negatively-charged electrolyte, wherein the positively charged electrolyte comprises polydiallyldimethylammonium chloride (as to instant claim 6), a pyridinium group containing polyelectrolytes including copolymers of N-alkylvinyl pyridines (as to instant claim 7), or **polyallylamine hydrochloride** (page 10, lines 16-30).

**Schlenoff** fails to teach the positively charged electrolytes being **fluorinated**.

**Stevenson et al** discloses a film used for coating a substrate, wherein the film comprises at least one bilayer of a polyanion electrolyte layer and a polycation electrolyte layer, wherein the polycation comprises a fluorinated polyallylamine hydrochloride ([0029], [0031]).

**Speaker** discloses an ion-exchange membrane comprising a deposited layer of a **fluorinated long-chain pyridinium bromide** as a positively charged polymer to modify the membrane surface and reduce its adhesive characteristics (Abstract, col. 4, lines 60-65).

Since **Stevenson et al** discloses similar polyelectrolyte composition comprising a positively charged polyelectrolyte and a negatively charged polyelectrolyte, as **Schlenoff**, but teaches the positively charged polyelectrolytes of **Schlenoff** being **fluorinated**, and the **fluorinated polyallylamine hydrochloride** of **Stevenson et al** is the same as disclosed on page 36 of the instant Specification, therefore, it would have been obvious to one skilled in the art at the time of the invention was made, to use fluorinated derivatives of other positively charged polyelectrolytes of **Schlenoff**, including polydiallyldimethylammonium chloride and copolymers of N-alkylvinyl pyridines in the composition of **Stevenson et al**.

Case law holds that those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

11. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stevenson et al** in US 2004/0191504.

**Stevenson et al** discloses a film used for coating a substrate, wherein the film comprises at least one bilayer of a polyanion electrolyte layer and a polycation electrolyte layer (Abstract). The polyanion electrolyte comprises a fluorine-modified polyacrylate ([0021], [0028]). The polycation comprises a fluorinated polyallylamine hydrochloride ([0029], [0031]).

As to instant claims 28-29, though **Stevenson et al** fails to teach the use of the film for reducing friction on a substrate, "reducing friction" appears to be a property of the polyelectrolyte film. Since the composition of **Stevenson et al** is the same as claimed in the instant invention, "friction reduction" is becoming an inherent property of the polyelectrolyte composition. "Products of identical chemical composition can not have mutually exclusive properties" (See MPEP 2112.01).

In alternative, claims 28-29 are intended use claims.

As to the claimed intended use, MPEP 2111.02 states:

During examination, statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the recited purpose or intended use results in a structural difference (or, in the case of process claims, manipulative difference) between the claimed invention and the prior art. If so, the recitation serves to limit the claim. [MPEP 2111.02 (Citing *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963)]

No structural difference can be discerned between the prior art and the instant invention.

12. Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stevenson et al** in US 2004/0191504, further in view of **Stirnimann et al** in US 6,355,300.

**Stevenson et al** discloses a film used for coating a substrate, wherein the film comprises at least one bilayer of a polyanion electrolyte layer and a polycation electrolyte layer (Abstract). The polyanion electrolyte comprises a fluorine-modified polyacrylate ([0021], [0028]). The polycation comprises a fluorinated polyallylamine hydrochloride ([0029], [0031]).

**Stevenson et al** fails to teach the fluorine-containing polyelectrolyte deposited on a surface of a magnetic disk.

**Stirniman et al** comprises a lubricating film deposited on the surface of a magnetic disk, wherein the lubricating layer comprises functionalized perfluoropolyalkylethers long chain polymers (col. 3, lines 45-55).

Since **Stirniman et al** teaches the use of fluorinated functionalized polymers as a lubricant on the surface of a magnetic disk, therefore, it would have been obvious to one skilled in the art at the time of the invention was made to use the fluorine-containing polyelectrolyte film of **Stevenson et al** as a layer on magnetic disc of **Stirniman et al** to provide lubrication to the magnetic disc, and for the reason of being easily deposited on the surface of the magnetic disc by electrostatic attraction of the opposite charged subsequent layers.

13. Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **DeLongchamp et al** in *Chem. Mater.*, 2003, 15, 1165-1173, as applied to claim 1, above, and further in view of **Chiba et al** in US 6,670,309.

**DeLongchamp et al** discloses a layer-by-layer deposited polyelectrolyte film for electrochemical applications comprising a cationic layer comprising linear polyethylene imine and an anionic layer comprising fluorine containing sulphonated polyolefin having a structure provided in claim 8 of the instant invention (Abstract, page 1165, page 1167).

**DeLongchamp et al** fails to teach a polyelectrolyte film being used for reduction of friction and being in contact with a magnetic disk storage medium.

**Chiba et al** discloses the use of fluororesin lubricant for magnetic recording disc, wherein the lubricant comprises a polymer comprising one or more polar groups, specifically a sulfonic group (col. 5, lines 1-16).

Since the lubricants are known for reducing friction, and **Chiba et al** teaches using fluororesin having at least one polar group as a lubricant for a magnetic disc, therefore, it would have been obvious to one skilled in the art at the time of the invention was made to use the fluoropolymer electrolytes of **DeLongchamp et al** for lubricating magnetic disc surfaces as well.

14. Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **DeLongchamp et al** in *Chem. Mater.*, 2003, 15, 1165-1173, as applied to claim 1, above, and further in view of **Moriga et al** in US 4,497,720.

**DeLongchamp et al** discloses a layer-by-layer deposited polyelectrolyte film for electrochemical applications comprising a cationic layer comprising linear polyethylene imine and an anionic layer comprising fluorine containing sulphonated polyolefin having a structure provided in claim 8 of the instant invention (Abstract, page 1165, page 1167).

**DeLongchamp et al** fails to teach the polyelectrolyte film composition applied to metal surfaces.

**Moriga et al** discloses a lubricant to be applied to metal surfaces comprising a polyakylene glycol and combination of a compound comprising a fluoroalkyl group and a residue of a sulfonic group or a salt thereof, and a compound comprising a fluoroalkyl group and a cationic quaternary nitrogen group (col. 3, lines 5-55).

Since it is known to a one skilled in the art that fluorocompounds are applied to metal surfaces for lubricating those, and **Moriga et al** teach the use of a combination of a cationic fluorocompound and an anionic fluorocompound as a lubricant for metal surfaces, therefore, it would have been obvious to one skilled in the art at the time of the invention was made to use the composition of opposively charged fluorinated polyelectrolytes of **DeLongchamp et al** for lubricating metal surfaces as well.

15. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being obvious over **Itami** in US 2003/0134209.

**Itami** discloses an electrophotographic photoreceptor an electrically conductive support having thereon a resinous layer, wherein the resinous layer comprises a fluorinated vinylic organic polymer and a fluorine-containing particles ([0009], [0012]). The fluorine-containing particles comprise polytetrafluoroethylene ([0212], Claim 15). The fluorine-

containing vinylic polymer comprises perfluorohexylsulfonyl monomers. The organic polymer comprises charge transportable component (claim 11). The resinous layer comprises a film ([0173], Claim 11).

Though **Itami** does not specify the fluorinated particles and the fluorinated polymer having opposite charges, however, since these components are used for charge transfer and, therefore are charged, and are the same as claimed in the instant invention, therefore, it is obvious to one skilled in the art, that these components would provide opposite charges.

16. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being obvious over **Lazarz et al** in US 4,289,600, as evidenced by **Yonkoski et al** in US 5,380,644.

**Lazarz et al** discloses a membrane material for use in electrolytical cells comprising polytetrafluoroethylene particles and an organic fluorinated lubricant (Abstract). The fluorinated lubricant comprises a cationic, anionic or amphoteric fluorosurfactants (col. 7, lines 10-15).

Though not specified by **Lazarz et al**, the cationic, anionic or amphoteric fluorosurfactants comprise polymers from fluorinated unsaturated monomers having polar groups (see Abstract, col. 7, 1-35 in **Yonkoski et al**).

Though **Lazarz et al** does not specify the fluorinated particles and the fluorosurfactant having opposite charges, since these components comprise the same polymers claimed in the instant invention, wherein the fluorosurfactant may have anionic or cationic

charges, and are used for charge transfer in electrochemical cells, therefore, it would have been obvious to one skilled in the art at the time of the invention was made, that these components may have opposite charges.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina Krylova whose telephone number is (571)270-7349. The examiner can normally be reached on Monday-Friday 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/I. K./  
Examiner, Art Unit 1796

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1796